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Doctoral Capstone Manuscript

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Online Education as a Medium to Advance Pediatric Care in China

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Section 1 - Literature Review

The term education has become more fluid with the advent of technology. In the early days of online learning, there was a stigma that internet education was less authentic than traditional, face-to-face instruction. There is now a movement to bring quality education to the masses. Respected American, Asian, and European institutions have joined together to offer free education globally. The members of a major collective, The Open Education Consortium (OEC), argue that the idea of open sharing in education is not new. “In fact, sharing is probably the most basic characteristic of education: education is sharing knowledge, insights and information with others, upon which new knowledge, skills, ideas, and understanding can be built” (Open Education Consortium, 2015).

Open Education, (referred to in this review as free and remotely assessable education) is a unique form of online education, which though globally accessible, is not practical as the sole delivery of education. Select American institutions of higher learning have begun to embrace a core value of open education, which is expanded educational accessibility, by entering global markets with physical and virtual learning opportunities. China, in particular, is an attractive partner due to its emergence as an economic and scientific superpower (University of Massachusetts, 2008). Until recently, China was a major ‘exporter’ of students (Pan, 2013). In line with their goal to bring China to the forefront of the higher education market and retain domestic students, the Chinese Ministry of Education is creating contracts with international universities and bringing in high-level professional experts from overseas (International Business Times, 2011). This review will illustrate that experts in the field of occupational therapy are a necessity in China’s growing internationalized education system.

The need for qualified occupational therapists in the United States is continuously increasing. Employment is expected to increase by 29% in the next 10 years, growth that is
much higher than average (Bureau of Labor Statistics, 2014). It follows that China’s exponentially increasing population (now 1.3 billion people) merits a sizable force of occupational therapists to meet the demands for habilitative and rehabilitative services.

The purpose of this review is to examine the current educational offerings and education standards for occupational therapists in China. It will highlight the discrepancies in occupational therapy education in China compared to other global occupational therapy education systems. In doing so, the review will acknowledge the Chinese education culture and how this shapes Chinese OT practitioners. Finally, the review will consider the challenges to international educational collaboration and identify areas for future development.

**Perspectives on Education in China**

**The Chinese Student**

Chinese students have a high dependency on their instructor, which is problematic when developing clinical autonomy. The culture of education in China promotes ‘mimetic’ learning, in which students seek to imitate their instructors (Tham & Tham, 2013). While this identical modeling of skills may support technical knowledge, it negates the ability of students to develop clinical reasoning. It is only recently that select universities in China have reformed teaching to change from an emphasis on memorization of factual knowledge to “the cultivation of creative and critical thinking, problem solving, and information acquisition and generation as well as intellectual independence” (Weifang, 2012). As of yet, such reform is not widespread.

**The Chinese Education System: Past, Present, and Future**

China operates the largest education network in the world, with 31 million students. In recent years, new non-state (private) universities have been established, a major shift from the mostly state-run education system of the past. With the advent of private institutions and
international academic ventures, China has struggled to create universally accepted missions and goals for their higher education system (Altbach, 2012).

Distance education in China is not a novelty. Radio and TV Universities (RTVUs) in China have been around for over 30 years. With Over 7 million “graduates”, China has the largest open and distance learning network in the world (Wei, 2010). RTVUs were originally created to meet the demands of China’s modernization and focused on specialized technical skills. Such specialized education did not demand that students become independent thinkers; instead, they were still teacher and tutor dependent.

In April of 2013, China launched its first Massive Open Online Course (MOOC). This was in response the growing presence of foreign operated MOOCs in China. The possibility of Chinese MOOCs was supported by academic institutions and internet power-players. Chinese universities are backed by internet developers (at least 10 major companies) who create interactive platforms to facilitate online learning. Yet, Even Chinese technical ventures struggle with government restrictions on TED Talks and YouTube videos, important resources for online education.

Yet, it is argued that the bigger challenge is philosophical, not technological. Traditionally, Chinese education is teacher-centric and focused on examinations, and Chinese learners are not used to a system that requires great inner motivation and self-discipline. Thus, online education in China becomes less about innovation and more about implementation.

**Occupational Therapy Education in China**

Occupational therapy education in the United States is shaped and regulated by the Accreditation Council for Occupational Therapy Education (ACOTE). In an effort to promote standards internationally, the World Federation of Occupational Therapists (WFOT) has set
standards that must be met for membership. Currently, China is not a member of WFOT and thus, Chinese occupational therapy programs do not ascribe to WFOT’s *Minimum Standards for the Education of Occupational Therapists* (2002). These standards reflect the values that underpin the profession. The *Minimum Standards for Education* outlines five areas of competence: (a) the person-environment-occupation relationship and its relationship to health; (b) therapeutic and professional relationships; (c) an occupational therapy process; (d) professional reasoning and behavior; (e) the context of professional practice. WFOT aims to have occupational therapy educational programs in all countries of the world meet their minimum standards. This will in turn guarantee of an adequate number of well-qualified teachers available for educating students in all countries.

Most notably, the standard of education to promote “professional reasoning and behavior” is not congruent with the tradition of Chinese teaching, which emphasizes factual knowledge and technical skills. As such, most Chinese trained occupational therapists are not prepared to individualize interventions and adapt their treatments to meet the unique needs of each client.

Education of *rehabilitation therapists* in China most commonly is a 3-year non-degree program followed by a short (40 hour) internship in occupational therapy, physical therapy, or speech and language pathology. The pay grade for rehabilitation therapists is equivalent to a technical degree. Currently, there are only six universities in China that offer a bachelor’s degree. It should be remembered that new OT practitioners in the United States must possess a master’s degree. Additionally, an increasing number of schools are transitioning to doctorate (OTD) programs.
China’s occupational therapy education system has been slow to develop due to the lack of qualified professionals available to teach (Da Hong, 2006). This slow progression is further hindered by the lack of a national organization of occupational therapists, or accrediting body that promote standards of education and practice.

**Keeping Current: International Standards for Continuing Education**

WFOT does not require continuing education from their members; WFOT, “encourages all members to engage in Continuing Professional Development (CPD) to maintain currency of knowledge and professional skills” (WFOT, 2015). Though not mandated, CPD or continuing education is a cornerstone for therapists who employ evidenced-based practice. The Council of Occupational Therapists for the European Countries (COTEC), “is convinced that evidence-based practice is vital to underpin Occupational Therapy practice throughout Europe” (COTEC, 2015).

In the *Tuning Publication*, the European Network of Occupation Therapy in Higher Education (ENOTHE) and the international Tuning task force (2008), outline reference points for the design and delivery of degree programs in occupational therapy. This definitive guide serves as a beacon for development of curricula as well as informing stakeholders in the profession. The publication describes life-long professional development as a competency for entry level and experienced occupational therapy practitioners.

The American Occupational Therapy Association (AOTA) and Canadian Association of Occupational Therapists (CAOT) view continued scholarship as a professional responsibility. It is the position of AOTA (2009) that “every occupational therapy practitioner should contribute independently or collaboratively to building the evidence base for occupational therapy practice and occupational therapy education”. CAOT (2011), echoes this position: “Continuing
professional education is essential for the personal and professional development of occupational therapists and for advancement of the profession of occupational therapy….CAOT recognizes that access to, and acquisition of, current relevant and evidence-based knowledge, skills, and behaviours are the key to the development and use of best practices in occupational therapy”.

In order to support the continuing education efforts of occupational therapists, AOTA and CAOT provide their members with resources for professional development in the forms of education opportunities, publications, and current research. The novice or experienced practitioner, has at minimum, one trusted and easily accessible source to encourage best-practice.

**Continuing Education in China**

Amerih (2013) reports that 71% of OT practitioners in developing countries state that continuing education is not easily accessible. Furthermore, an OT in a developed country has a 154% greater chance at engaging in continuing education than their counterpart in a developing country. These statistics suggest that ease of accessibility should be a priority in the development of continuing education.

In addition to limited accessibility, China’s attitude towards continuing education is a barrier to further professional development for occupational therapists. Davey and Chen (2008) report that continuing education in China is still considered amateurish and is not viewed with the same amount of respect as other forms of higher learning. Continuing education is less regulated, less developed, and often conducted with less rigor than degree programs. Chinese adult learners are hesitant to spend money and time on courses that are not valued by their employers and/or colleagues.
As illustrated, OT practitioners across the world are guided by their professional organizations in terms of continuing education. Without definitive positions from governing bodies, Chinese therapists lack extrinsic motivation to continue their studies in a professional capacity. The result is practitioners that are out of touch with current best-practice and have limited resources to acquire new knowledge.

**Expanding to China**

**Current Online Presence and Student Attitudes**

MOOCs such as Coursera and Edx allow Chinese students access to prestigious American universities such as MIT, Harvard, and Berkley. Students from China have shown great interest in MIT’s technology courses, suggesting that the current generation of students is open to online learning platforms (Sharma, 2013). However, an openness to online education does not ensure success, and data indicating Chinese student success in MOOCs is unpublished.

David Gray, CEO of UMassOnline argues that Chinese student willingness to participate is an accomplishment in itself. He writes, “They may not completely understand what it means to pursue a course of study over the internet, but they’re open to it, and that’s huge” (UMassOnline, 2008).

Campell (2007) reports that student attitudes towards e-learning do not support success. Chinese students reported e-learning to be “not worth the effort” and have a difficult time finding motivation to participate in non-traditional learning. Similarly, Tham & Tham (2013), argue that Chinese students lack self-directed motivation, a necessity for e-learning.

**Meeting Chinese Requirements for International Collaboration**

Universities looking to create a presences in China, virtual or physical, must collaborate with a variety of Chinese entities such as the Ministry of Education and a partner university.
These collaborations take time; evidenced by the introduction of UMassOnline in China, which was 25 years in the making.

Mirroring UMassOnline, Duke’s transition into the Chinese education market was not simple. Duke was challenged to keep the integrity of their intentions while adhering to guidelines from various bureaucratic entities in China. Duke insists their contingencies did not compromise their mission in China, but there is an argument in the larger academic community that American universities lose autonomy in China (Farrar, 2015).

**Proposed Collaborative Efforts to Support Continuing Education**

There are two issues to consider: improved education standards for entry-level occupational therapy practitioners and increased continuing education for skill development of current practitioners. Without a Chinese organization to set education standards (such as ACOTE), the introduction of an American undergraduate or graduate occupational therapy program presents as a logistical quagmire. Alternatively, it is believed that increasing the sophistication of skills of practicing therapists is, perhaps, as important as increasing the number of qualified therapists.

The less standardized formatting of continuing education, thus becomes an attractive method to improving education for occupational therapists in China. Continuing education will increase the sophistication of occupational therapist’s skills, and provide a time and cost-effective manner of increasing relevant knowledge.

**Pioneering Continuing Education in China: Implementation and Quality Assurance**

The issue of improving occupational therapy education is systematic and must be addressed in China to ensure responsiveness, cooperation, and sustainability. Yet, DaHong (2006) argues that Chinese occupational therapy education should be influenced by foreign
colleagues – through use of Western OT theory, implementation of international standards, and cost-effective educator training.

At present, there is one ACOTE and WFOT supported university that has responded to China’s need for advanced occupational therapy education. Pacific University (Oregon) is prepared to expand its respected occupational therapy education programming to China. The proposed program is aimed at therapists with a need/desire to increase knowledge in the field of pediatrics. This area of practice has been targeted to address the ever increasing population of disabled children in China and to address the disparity between China’s pediatric care and that of developed countries. To respond to the need for easily accessible content, Pacific University has offered hybrid or blended courses specific to pediatric rehabilitation. Blended/hybrid courses offer convenience, ease, and accessibility by combining the best of face-to-face learning with online instruction that is presented in a pedagogically valuable manner (McGee & Reis, 2012).

Using continuing education to improve the standards of therapists who are already practicing can increase the number of qualified professionals available to teach, and thus directly influence the quality of Chinese occupational therapy education in the future.

Conclusions and Areas for Future Study

The purpose of this literature review was twofold. First, this review sought to examine the current standards of occupational therapy education in China. Second, the review proposes alternatives for more rigorous education standards of current Chinese educators and new methods for improved clinical competence of practicing therapists.

The most sustainable changes to educational standards will come from within China. Continuing education is suggested to be a cost-effective avenue for improvement. Further
research should be dedicated to tracking foreign continuing education efforts in China. With an understanding of trials and triumphs, other global leaders in occupational therapy can adapt their efforts to best support Chinese OT practitioners.
Section 2 - A New Proposal for Program Development:

Advancing Caregiver Education and Confidence

In an effort to more wholly understand the current standards of care for children with disabilities, I traveled to China for 5 weeks. I visited orphanages, a foster home, a pediatric hospital, and private pediatric clinic. I interacted with Chinese rehabilitation therapists, but more frequently with the caregivers of children with disabilities. I came to discover that these caregivers, most commonly *ayis*, could benefit from tailored education relating to care of children with disabilities.

An *ayi*, or auntie, is a broad term for a hired caregiver who may work for private families or in pediatric institutions. In many Chinese families, an ayi is integral part of the child’s development and upbringing. In foster homes and orphanages, ayis are predominant caregivers for children with and without disabilities. Chinese ayis and parents may be underprepared to care for children with complex or multiple disabilities. The lack of access to qualified rehabilitation therapists presents further challenges for these caregivers. In tandem with efforts to provide continuing education for current practitioners, I identified online education as a complimentary and necessary venture for Pacific University’s established pediatric online programming in China.

Online education is arguably the most relevant method for advancing caregiver education and confidence. While in China, I was awestruck by the profusion of mobile technology, particularly in major cities. An estimated 730 million people have access to internet on personal or public devices. Additionally, it is estimated that 95% of the Chinese population own a cellphone, and that more than 62% of these users have an internet-enabled phone. These percentages equate to 691 million cellphone users and over 300 million Chinese using high-speed internet on their mobile devices. (Perez, 2015; Pew Research Center, 2014). Considering
the prevalence of internet access, online programming is a clear choice for reaching parents and caregivers.

**Selecting the Pilot Course Subject and Audience**

Bethel China is a unique group of foster homes that serve children with visual impairments. Children at Bethel come from all provinces in China, most from orphanages, to receive specialized education and care. Bethel welcomes all children, regardless of the nature of visual impairment or comorbid disability. In recent years, Bethel has seen an upsurge of children with disabilities beyond visual impairment. While staff are specially trained in caring for children with visual impairments, they are not as well equipped to handle the complexities of additional significant disabilities.

I spent one-on-one time with Bethel caregivers, teacher, and several of the most impacted children. Most children do not have formal diagnoses of conditions other than visual impairment. Observation, interviews with caregivers, and informal evaluations of select children led me to conclude that many of Bethel’s children exhibit behaviors associated with sensory processing or sensory integration deficits.

The topic of *Sensory Integration* was a natural choice to pilot caregiver-specific training as its related theory and intervention strategies were to be applicable to many children, both in and outside of Bethel.

**Parameters for the Pilot Course**

The proposal for online programming for caregivers was presented to Bethel and accepted by Bethel’s Development Manager. The course was created under the existing Pediatric Specialty Certificate Program started by Pacific University.
The topic of Sensory Integration is broad and complex, and can be difficult for even experienced OT practitioners to articulate. The course was designed with basic descriptions of the sensory system and the process of sensory integration. The course did not delve into A. Jane Ayres theory of Sensory Integration® as this was deemed to be beyond the needs of Chinese caregivers.

Sensory-based intervention is highly individualized. OT practitioners and parents must customize a child’s sensory integration therapy or home program based on the child’s unique needs. As discussed, Chinese students display different learning styles than their American counterparts and may focus on memorization of facts versus development of autonomous clinical reasoning. This style of skill acquisition does not support the provision of individualized sensory-based ‘therapy’ at home. In an effort to encourage caregivers to develop clinical thinking skills, assignments were generated that require the students to apply their knowledge.
Section 3 – Outline of Pilot Course

I. What is Sensory Integration?
   A. The Seven Senses
      1. Introduces Proprioception and Vestibular sensory input
   B. Sensory Integration, Explained
      1. Defines Sensory Integration
      2. Describes process of Sensory Integration
      3. Illustrates sensory integration challenges (includes case study)
      4. Differentiates between over and under stimulation.

II. Caregivers Guide to Sensory Help at Home
   A. Sensory Help at Home
      1. Provides guidelines for using sensory strategies in a safe and non-threatening way
      2. Explains difference in sensory play for children who are under/over stimulated by sensory input
   B. Activity Guidelines
      1. Incorporating proprioceptive input in play
      2. Incorporating vestibular input in play
      3. Incorporating tactile input in play
Section 4 – Conclusion and Proposed Future Efforts

Occupational therapy efforts at Bethel are best understood as *education* and *health promotion*. Education efforts impart knowledge and information about occupation, health, and participation and that do not result in the actual performance of the occupation/activity. It is not consistently feasible for practicing occupational therapists (from US, UK, etc.) to travel to China to offer individualized occupational therapy for Bethel’s children. Offering tailored education for Bethel staff and caregivers is a more sustainable plan.

Wilcock (2006) illustrates the connection between occupational therapy and health promotion:

>[F]ollowing an occupation-focused health promotion approach to well-being embraces a belief that the potential range of what people can do, be, and strive to become is the primary concern and that health is a by-product. A varied and full occupational lifestyle will coincidentally maintain and improve health and well-being if it enables people to be creative and adventurous physically, mentally, and socially. (p. 315)

Bethel strives to combat preconceived cultural ideals that suggest that visually impaired children are less capable than their sighted peers. Bethel contends that visual impaired children and adults should be given equal opportunities to a meaningful occupational life. Bethel’s fundamental beliefs and practices embody occupational therapy’s definition of health promotion.

In summary, caregivers and staff at Bethel are not equipped to offer care which effectively engages children with sensory integration challenges or cognitive delays. Education of caregivers and Bethel staff is considered a sustainable method of improving care of children with multiple disabilities. The education will use a health-promotion approach to ensure that the
efforts are in line with Bethel’s mission to “provide high-quality, education, life skills and livelihood opportunities to blind and visually impaired orphans” (2015).

**Implementation**

The majority of Bethel staff speak only Chinese. Thus, the generated material for the course must be translated. This, of course, is no easy feat as direct translation for specific sensory-based terms may not be available. Bethel China is a non-profit organization and does not have the funds to pay for training material or translation. The necessity of translation thus becomes the responsibility of the course developers/instructors and presents both financial and temporal challenges.

The Pediatric Specialty Certificate Program (Pacific University) is the current platform for the pilot Sensory Integration course. As Pacific University and involved faculty are committed to enduring relationships with Chinese organizations, the adoption of the Sensory Integration course as part of the Certificate Program is ideal. The course material may be kept as is for Chinese caregivers and parents, or modified to meet the program standards for educating current practitioners.

My time in China, above all else, taught me that flexibility is a necessity – in occupational therapy practice, in education, and in forging international relationships. I anticipate obstacles as I move forward in implementing the course and will accept any barriers with an open mind and a focus on the goal of helping Chinese children live their lives to the fullest.
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